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ABSTRACT

Three human response experiments are described in which the participants were asked to rate the task difficulty via a linear, nonadjectival, nonordinal rating scale. The first experiment involved the solution of a simple puzzle. Upon the successful solution of the puzzle or at the expiration of an allotted time, whichever occurred first, the subject was asked to rate his impressions of the difficulty he encountered in working the puzzle on the nonadjectival scale. A high correlation coefficient was found between ratings and performance. The second experiment involved a new set of subjects and the "subcritical-critical" tracking tasks. After completing a number of critical runs, the subject performed five subcritical tasks with different instability levels. After each of these subcritical runs, he was asked to rate the task difficulty on the nonadjectival scale. Finally, another group of subjects was utilized in an experiment in which an "optimum" manipulator sensitivity was chosen for a subcritical system using the nonadjectival scale. This rating concept shows potential for discerning relatively minor changes in system acceptability. It is particularly useful in cases where adjectival scales are either inappropriate or difficult to design in a linear fashion.